

## **PICEAS – Pacific Island Cetacean and Ecosystem Assessment Survey**

### **Weekly Report, August 25-31, 2005**

This is the fifth week of the PICEAS-05 cruise. Last week, you may recall, we were still bouncing-off-the-bulkheads-high from the Palmyra Island stop. Sadly, I don't have anything nearly as fun to report this week. So here it is ... just the raw, unadulterated science.

We deployed the Scripps High-frequency Acoustic Recording Package (HARP) on the seafloor near Palmyra Island after spending the night anchored there. We found the shelf at 600 meters depth, just as the map in the Palmyra lab showed, and dropped the HARP just inshore of that. The release went flawlessly, thanks to the handiness of our deck department. We hope the little beast finds its way back to the surface again, loaded with a terabyte of marine mammal sounds.

After we left Palmyra, we steamed to the north and east, surveying for whatever marine mammals should cross our paths. What we found was a little surprising to us ... mostly spotted and spinner dolphins and even some spot/spin schools ... our old friends from the eastern tropical Pacific. Most of the spinner dolphins here have a unique color pattern and are classified as the "southwestern" stock. They look like Hawaiian spinners, but they have a jazzy stripe just above their pale bellies. Striped dolphins are the other most common dolphin out here, but we also had a sighting of the relatively rare Fraser's dolphins (which also have stripes ... are you noticing a pattern here?). Two sightings of Fraser's on the same cruise are unusual; two sightings on the same leg may be a record!

In the NE corner of the Palmyra EEZ we found a band of rain and overcast that is such a frequent companion that it has been given a name ... the Inter-Tropical Convergence Zone (ITCZ). We were dodging rain squalls in the ITCZ for much of this week. One of our CTD/net tow stations had to be cancelled when lightning bolts began to fly. We remained under the clouds as we moved to a new area west of Palmyra Atoll and Kingman Reef. There we found a big, scattered group of false killer whales and sperm whales. The acoustics team found the first group of false killer whales, but we got two on-effort visual detections of subsequent groups. All the animals were difficult to approach by small boat, and we did not get any biopsies of the false killer whales. We got one sperm whale biopsy from the bow of the Big Mac. Sperm whales were actually the most commonly sighted species this week, and we managed to obtain another biopsy from the small boat later on Tuesday.

Yesterday was the first day on this survey that was mostly lost due to weather. We had Beaufort 6 winds blowing almost directly in our faces most of the day. Even so, we managed to get one spinner and one striped dolphin sighting yesterday.

Most importantly, scientist Michael Force won the cribbage tournament. Way-to-go Mike!



### Marine Mammal Sighting Summary

082505	0928	N05:53.46	W161:52.63	49.8 nmi	3.6
	1836	N07:01.62	W161:06.19		
082605	0709	N06:36.37	W160:45.54	65.8 nmi	3.1
	1820	N07:46.17	W159:53.88		
082705	0641	N08:58.56	W160:16.94	82.7 nmi	3.4
	1850	N07:33.34	W161:18.99		
082805	0640	N08:44.97	W161:41.95	95.3 nmi	4.2
	1850	N07:13.25	W162:47.35		
082905	0653	N06:06.73	W163:32.90	57.5 nmi	4.9
	1856	N05:11.15	W164:12.23		
083005	0658	N05:40.75	W165:04.48	75.0 nmi	4.0
	1850	N06:59.44	W164:10.95		
083105	0647	N07:34.13	W163:08.13	31.3 nmi	5.6
	1617	N08:38.12	W162:23.31		

CODE	SPECIES	TOT#
002	Stenella attenuata (offshore)	5
003	Stenella longirostris (unid. subsp.)	2
013	Stenella coeruleoalba	4
026	Lagenodelphis hosei	1
033	Pseudorca crassidens	3
046	Physeter macrocephalus	9
070	Balaenoptera sp.	3
072	Balaenoptera edeni	1
078	unid. small whale	1
096	unid. cetacean	1
101	Stenella longirostris (southwestern)	3
102	Stenella longirostris longirostris	1
TOTAL		34

### Acoustics Squeakly Report (Shanon Rankin & Julie Oswald)

The acoustics team often detects cetaceans that have gone undetected by the visual team, especially when the viewing conditions are poor. We have a rule that we cannot tell the observers about animals that we are hearing until they have passed the beam and are beyond the detection range of the observers.

The “blackfish” vocalizations began at 9am, and for the next two hours we passed over five miles of continuous subgroups before acoustics could technically say there were no vocalizations ahead of the ship. Rather than wait for this to change-- we immediately began an acoustics chase. As we approached the area where the animals were dispersed, an area that spread-out 5-miles out from our trackline, the observers began spotting several large whales, but no “blackfish.” Finally, they made themselves visible to the observers, and these particular “blackfish” turned out to be false killer whales. Soon, the acoustics team was completely ineffective in locating anything-- sperm whales and false killer whales were calling from all directions, near and far. It was only a matter of time! Needless to say, we spent the remainder of the day trying to break free from this immense



mass of squid-eaters. The question is, "Why can't these animals play nice and WITHIN the range of the observers?"

On the flip side, we have noticed that many of the dolphin schools have adopted a habit of going quiet the minute we maneuver the ship. We can sympathize with the animals, as the ship makes an awful racket when it changes course or speed. This week we had several unsuccessful acoustics chases of dolphin schools that were lost due to this unfortunate behavior.

We have been fortunate in obtaining more recordings of spotter, spinner, and striped dolphin schools, as well as a group of Fraser's dolphins.

### **Birder Blurp** (Michael Force & Sophie Webb)

Our Cruise Leader reminded the victor of the McArthur II Cribbage Tournament that his weekly assignment was due, thus postponing the scheduled victory parade. Check your local listings. This week was notable for diversity, not abundance! We frequently recorded 12 species days, even reaching the staggering total of 16 on Sunday. However, most of these sightings were only of one or two individuals. One of the characteristics of the pelagic ecosystem—patchy distribution—was again clearly evident this week. Days where we were in the money alternated with vast stretches of nothing, separated by a mere 100nm of what appeared to be homogenous habitat. Here in this “empty” ocean, an opportunistic scavenger, Tahiti Petrel, was a common sight. Despite the apparent paucity of birds, we saw 25 species this week, slightly above average. In addition to nine species of petrels, we found our first Sooty Shearwaters since our departure from San Francisco, and a small but noticeable increase in numbers of an eastern Pacific species, Juan Fernandez Petrel. This week’s star attractions included Buller’s and Flesh-footed Shearwaters, a Parasitic Jaeger, a couple of Leach’s Storm-Petrels, and a scattering of Pycroft’s Petrels, one of the latter well documented by Sophie’s swift camera skills. Two “Dark-rumped” Petrels seen on Wednesday pose some intriguing questions. Were they Hawaiian or Galapagos Petrels? Geographic logic suggests the former, but at-sea identification of these two recently split species is extremely difficult. If Galapagos Storm-Petrels can wander this far west, then what about Galapagos Petrels?

Cruise leader bird report: “Birds?”

<b>Biopsy Weekly Report</b>	<b>Weekly Total</b>	<b>Cruise Total</b>
Bryde’s whales	0	1
Pilot whales	0	2
Humpback whales	0	3
Melon-headed whales	0	41
Sperm whales	2	4
False killer whales	0	18
Spotted dolphins	0	2
Spinner dolphins	0	3



Rough-toothed dolphins	0	2
Bottlenose dolphins	0	11

<b>Photo-ID Weekly Report</b>	<b>Weekly Total</b>	<b>Cruise Total</b>
Humpback whale fluke IDs	0	4
Melon-headed whale (# groups)	0	2
False killer whales (# groups)	1	3
Pilot whales (# groups)	0	6
Striped dolphins (# groups)	1	2
Spotted dolphins (# groups)	2	3
Spinner dolphins (#groups)	4	4
Fraser's dolphins (#groups)	1	1

### **Oceanographic Data Collections** (Mindy Kelly and Lacey O'Neal)

<b>DATE RANGE</b>	<b>DAY</b>	<b>CTD</b>	<b>XBT</b>	<b>Bongo</b>	<b>Manta</b>
<b>PICEAS-05</b> <b>Leg 2 - Week 3</b>  <b>8/25 to 8/31</b>	Thursday	1	3	0	0
	Friday	2	3	1	1
	Saturday	2	3	1	1
	Sunday	2	2	1	1
	Monday	2	3	1	1
	Tuesday	2	3	1	1
	Wednesday	2	3	0	0
	<b>Totals</b>	13	20	5	5

This past week was a quiet but still busy week for the oceanographers. All equipment has been working well (shh, not too loud) and operations have been running smoothly. Temperatures have remained a constant 28°C (82.4°F) to 29°C (84.2°F) while the net tow offerings have dwindled quite a bit from the previous week. A few speckles and layers have appeared on the echo-sounder screen (mostly morning stations) but nothing too exciting. Hopefully next week will yield more exciting news and stories from the sea.

### **The Weekly Flying Fish Report** (Jim Cotton)

Whoever coined the phrase “negative data is good data” should have added “but it’s not much fun to collect.” This past week we collected zero flying fish at five of the seven stations. The tallies for our collection this week are as follows:

- 4 Two-wing flying fish
- 5 Short-wing flying fish
- 37 Lantern fish
- 1 Puffer fish for the aquarium that was released later because it would not eat.

To quote Jay Barlow “I told you if you kept dipping there wouldn’t be any left.”